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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|-------------------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/586,430 | KONRAD, FRANZ | |
| | Examiner ANDREW T. KIRSCH | Art Unit 3781 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-107 is/are pending in the application.
- 4a) Of the above claim(s) 76-94 is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-75 and 95-107 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 02 August 2007 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement (PTO/US/06)
 Paper No(s)/Mail Date 8/2/2007
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____
- 5) Notice of Informal Patent Application
- 6) Other: NPL Friction Coefficients

DETAILED ACTION

Claim Objections

1. Claim 68 is objected to because of the following informalities: "is provided in the form of **at** web projecting out...". Appropriate correction is required.
2. Claim 102 is objected to because of the following informalities: "and another sealing surfaces oriented perpendicular to..." Appropriate correction is required.

Specification

3. The abstract of the disclosure is objected to because it contains the self evident clause "The invention relates to...". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 98 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
6. Claim 98 recites the limitation that an interior of the container is sealed off from the external atmosphere is evacuated. Although it is possible for the internal pressure to be reduced, it is not possible to completely evacuate the contents of a vessel without unsealing, because the matter or gas inside cannot escape while the interior is sealed off.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 20, 41, 66, 75, 97, 99 and 103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

10. In the present instance, claims 20 and 41 recite the broad recitation of a lower limit and an upper limit, and the claim also recites particular values and preferable values which are narrower statements of the range/limitation.

11. For the purposes of examination, it is interpreted that the claimed limitation is that broader range (3 degrees to 25 degrees).

12. In the present instance, claim 75 recites the broad recitation of a tapered region between .1 and 3.0 degrees, and the claim also recites a preferable range of 0.6 to 1.0 degrees which is the narrower statement of the range/limitation.

13. In the present instance, claim 97 recites the broad recitation "is reduced to a pressure lower than...", and the claim also recites "in particular, is evacuated" which is the narrower statement of the range/limitation.

14. In the present instance, claim 103 recites the broad recitation of a dimension between 1.0mm and 2.5mm, and the claim also recites preferably 1.5mm which is the narrower statement of the range/limitation.

15. Claim 66 recites "a retaining mechanism is disposed in the region of a separating device which can be inserted in the interior..." The claim is indefinite because it is not clear as to whether the retaining mechanism or the separating device is the structure which can be inserted in the interior.

16. Claims 39 and 99 recites the limitation "the projection" in the third line. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1-4, 6-13 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,048,705 (Kucera hereinafter).
19. In re claim 1, with reference to Figs. 1-4 below, Kucera discloses a product capable of being formed by: Method of assembling a cap (13) of a closure device with an open end of a housing container (10) to form a container system for body fluids, tissue parts or tissue cultures, whereby a relative rotating or pivoting movement is effected about a common longitudinal axis between the cap (13) and the housing container (10, 12), wherein an axially directed pressing force is applied to at least one of the components to be assembled more or less in the direction of the longitudinal axis in order to generate the relative movement. (Note that in its normal use, the jar is capable of being rotated relative to a stationary lid to perform the screwing attachment, in which an axial pressing force will be imparted on the jar).

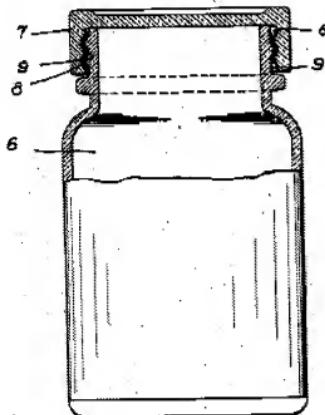


Fig. 1.

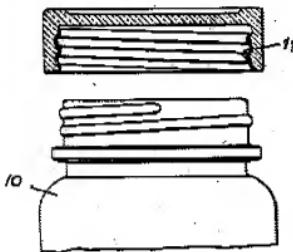


Fig. 2.

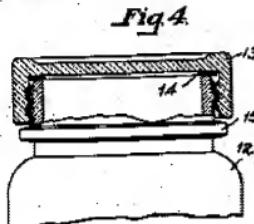


Fig. 4.

20. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed ("for body fluids, tissue parts or tissue cultures ") does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

21. In re claim 2, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the pressing force is applied to the cap (13) of the closure device.
22. In re claim 3, with reference to the Figs. above, Kucera discloses the claimed invention including wherein when the pressing force is being applied, the cap (13) is held stationary relative to the housing container (12) and the housing container (12) is displaced in the relative rotating or pivoting movement (due to the helical threads).
23. In re claim 4, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the housing container (12) is held stationary relative to the cap (13) when the pressing force is being applied (although not explicitly disclosed, the cap and container of Kucera are capable of being attached by the claimed method).
24. In re claim 6, with reference to the Figs. above, Kucera discloses the claimed invention including wherein before screwing on the cap (13), a sealing device (14) is inserted in it.
25. In re claim 7, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the relative rotating or pivoting movement about the common longitudinal axis is caused by at least certain regions of threads of a thread arrangement co-operating with one another (column 1, lines 37-40).
26. In re claim 8, with reference to the Figs. above, Kucera discloses the claimed invention including wherein before applying the pressing force (F), one of the components to be assembled is pre-positioned relative to the other one of the

components to be assembled by a free rotation about the common longitudinal axis (in an instance where rotation is required before the threads catch).

27. In re claim 9, with reference to the Figs. above, Kucera discloses the claimed invention including wherein during the relative rotating or pivoting movement about the common longitudinal axis, the threads of the thread arrangement (column 1, lines 37-40) engage with one another across the entire length of the screwing-in path until the fully screwed-in position is reached (as in re Fig. 4).

28. In re claim 10, with reference to the Figs. above, Kucera discloses the claimed invention including wherein before the assembly process on at least one component (13) forming the container system, a coating (11) is applied (column 1, lines 41-46).

29. In re claim 11, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the coating (11) is applied to at least certain areas in the region of a coupling mechanism (threads) between the cap (13) and the housing container (12).

30. In re claim 12, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the coating is applied to the part of the thread arrangement disposed on the housing container (12) (column 1, lines 44-48).

31. In re claim 13, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the coating is applied to the part of the thread arrangement disposed on the cap (13) (column 1, lines 37-40).

32. In re claim 16, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the coating (11) is applied to the respective coating region continuously or all over.

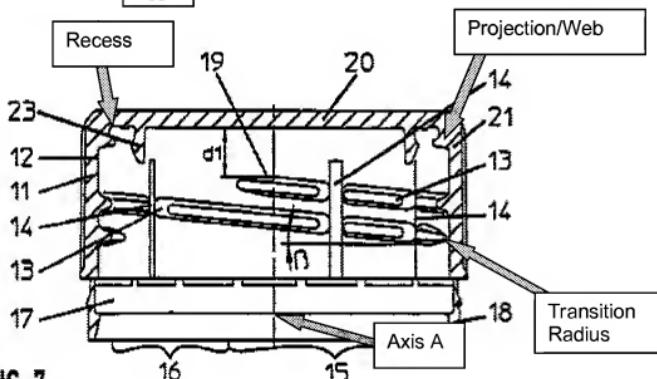
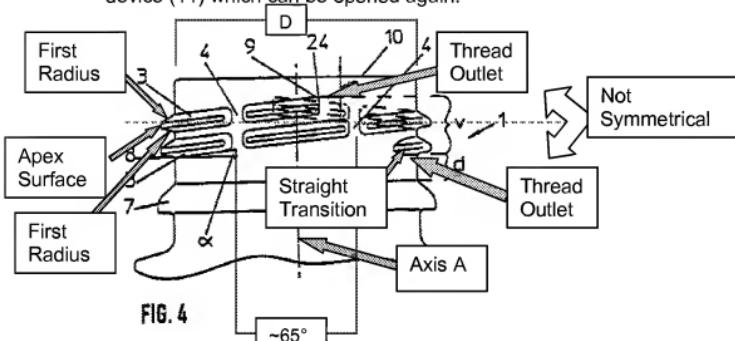
33. In re claim 17, with reference to the Figs. above, Kucera discloses the claimed invention including wherein the coating (11) reduces friction between the components to be assembled in readiness for the joining operation.

34. Note that according to www.engineershandbook.com, the coefficient for glass on glass friction is between 0.9 and 1.0, and between 0.5 and 0.7 for glass on metal friction. Therefore, by coating the threads of with metal as taught by Kucera, the friction is reduced.

35. Claim 19, 20, 22, 23, 26-28, 39-41, 43, 44, 47-58, 60, 66-74, 95, 97-102, 104, 106 and 107 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,006,930 (Dreyer hereinafter).

36. In re claims 19 and 40, with reference to Figs. 4 and 7 below, Dreyer discloses: Cap (11) for forming a closure device for a housing container (10) of a container system for body fluids, tissue parts or tissue cultures, which cap (11) comprises a cap casing (21), two end regions (18, 20) spaced apart from one another in the direction of a longitudinal axis (A) and at least a first part of a thread arrangement (3, 13) extending on an internal surface (12) [external surface (1)] of the cap casing (21) [housing container (10)], wherein a pitch angle (α , β) of at least one thread (3, 13) of the thread arrangement (3/13) is selected from a range with a lower limit of 2° and an upper limit of

30° ("3.5°" column 7, lines 36-37) by reference to a plane oriented perpendicular to the longitudinal axis (A), and which housing container (10) has two ends spaced apart from one another in the direction of a longitudinal axis and bounding an interior, and at least one of two ends has an open end face (at 10) which can be closed by the closure device (11) which can be opened again.



37. In re claims 20 and 41, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the pitch angle (α/B) is selected from a range with a lower limit of 3°, and an upper limit of 25° ("3.5°" column 7, lines 36-37).

38. In re claims 22 and 43, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the at least one thread (3/13) is formed by several first thread segments (3/13) (column 6, lines 20-27) in its longitudinal extension disposed one after the other and spaced at a distance apart as viewed in the circumferential direction (see Figs. 4 and 7).

39. In re claims 23 and 44, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread arrangement (3/13) is made up of several threads (column 6, lines 3-6 and 20-27).

40. In re claim 26, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a respective thread length of the individual threads (13) making up the thread arrangement are the same as or smaller (280 degrees) in the plane oriented perpendicular to the longitudinal axis as viewed around the circumference than an internal circumference of the cap casing (360 degrees) in the region of the thread arrangement (3) (column 6, lines 20-27).

41. In re claim 27, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a thread (3) extends more across half the internal circumference of the cap casing (21) (280 degrees is more than half of the circumference).

42. In re claim 28, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the at least one thread (13) projects out from the internal surface (12) of the cap casing (21) in the direction towards the longitudinal axis (A).

43. In re claim 39, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein an internal clearance width (across inner surfaces of threads) of the projection (see Figs. 7 and 16A) which can be placed facing an open end (at 10) of a housing container (10) approximately corresponds to an external dimension (see Fig. 4) of the housing container (10) in the region of its open end (at 10).

44. In re claim 47, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the sum of the thread lengths of the threads (3) making up the thread arrangement in the plane oriented perpendicular to the longitudinal axis (A) as viewed around the circumference is the smaller than an external circumference of the housing container (10) in the region of the thread arrangement (3) (due to the slotted vent features 4, the threads 3 are considered to extend less than 360 degrees around the circumference because they are broken into segments).

45. In re claims 48 and 49, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread (3) extends with its full thread height between its thread beginning and its thread end (at 9) across an angle of between approximately 65 degrees (see Fig. 4) as viewed around the circumference.

46. In re claim 50, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread (3) has a thread outlet (see Fig. 4) in the portion of its thread beginning, starting from its full thread height, which constantly decreases in

height (off of the external surface, due to the tapered beginning) towards the external surface (1).

47. In re claim 51, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread (3) has another thread outlet (see Fig. 4) in the portion of its thread end (at 9), starting from its full thread height, which constantly decreases in height towards the external surface (again due to the taper).

48. In re claim 52, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread outlet (see Figs.) is formed by a transition radius.

49. In re claim 53, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the respective threads (3) directly adjacent to one another in the circumferential direction are spaced at a distance apart from one another (both vertically and circumferentially).

50. In re claim 54, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a thread cross-section of the thread (3) is non-symmetrical in a plane oriented parallel with and extending through the longitudinal axis (note that even if the cross section were taken of a single thread which was symmetrical about one plane, there would be several other planes in which it would not be symmetrical about).

51. In re claim 55, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread cross-section has an apex surface (see Fig. 4) in the portion of the full thread height of the thread (3) oriented parallel with the longitudinal axis (A).

52. In re claim 56, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread cross-section on the side directed towards the open end face (at 10) of the housing container (10) is bounded by a first radius (see Fig. 4) starting from the apex surface (see Fig. 4) towards the external surface (1).

53. In re claim 57, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread cross-section on the side remote from the open end face (at 10) of the housing container (10) is bounded by a straight transition surface (see Fig. 4) extending at an angle in the direction towards the open end face (at 10).

54. In re claim 58, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread cross-section is bounded between the apex surface (see Fig. 4) oriented parallel with the longitudinal axis (A) and the transition surface with another radius (see Fig. 4).

55. In re claim 60, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the thread beginnings extend into the region of the external surface (1) close to its open end face (at 10).

56. In re claim 66, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a retaining mechanism (edge of Projection, see Fig. 7) is disposed in the region of a separating device (Projection) which can be inserted in the interior with a view to establishing its initial position (see Fig. 16a).

57. In re claim 67, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the retaining mechanism (Projection) is provided in the form

of at least one shoulder projecting out from the circumference of the internal surface

(12) in the direction towards the longitudinal axis (A).

58. In re claim 68, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the retaining mechanism (Projection) is provided in the form of a web projecting out from at least certain regions of the circumference of the internal surface (12) in the direction towards the longitudinal axis (A).

59. In re claim 69, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the web (see Fig. 7) is disposed continuously around the circumference of the internal surface (12).

60. In re claim 70, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the retaining mechanism (Projection/Web) is provided in the form of a reduction in an internal dimension (diametrically) of the interior (of the cap).

61. In re claim 71, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the retaining mechanism is provided in the form of a groove-shaped recess (see Fig. 7) extending round the circumference of the internal surface (12).

62. In re claim 72, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a positioning mechanism (23) is disposed in the region of a working position for the separating device (Projection/Web) to be inserted in the interior (of the cap).

63. In re claim 73, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the positioning mechanism (23) is provided in the form of a reduction in an internal dimension (diameter) of the interior (of the cap).

64. In re claim 74, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the positioning mechanism (23) is provided in the form of an abutment surface (bottom surface of 23) oriented more or less perpendicular to the longitudinal axis (14).

65. In re claim 95, with reference to the Figs. above, Dreyer discloses the claimed invention of a container system, comprising at least a cap (11), a sealing device (Projection/Web) retained in it and a housing container (10), and the housing container (10) is as claimed in claim 40.

66. In re claim 97, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein an interior sealed off from the external atmosphere is reduced to a pressure lower than the external ambient pressure (Note that the pressure in a sealed container is inherently capable of being reduced by simply cooling the contents).

67. In re claim 98, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein a retaining ring is disposed between a shoulder projecting radially around a stopper of the sealing device and a projection of the cap spaced at a farther distance from the housing container (as in re claim 67 above).

68. In re claim 99, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein an internal clearance width of the projection of the cap

which can be directed towards an open end of a housing container more or less corresponds to an external dimension of the housing container in the region of its open end (as in re claim 39 above).

69. In re claim 100, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein at least one passage (14) is formed between the sealing device (Projection/Web) and an open end (at 10) of the housing container (10) when the threads (3, 13) of a thread arrangement on the housing container (10) and on the cap (11) are still engaged (see Fig. 16b, and column 9, lines 38-46).

70. In re claim 101, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the passage (14) is formed between a stopper (23) of the sealing device (Projection/Web) to be inserted in the interior and the open end (at 10) of the housing container (10) (Note that the functional limitation of the sealing device being "inserted" does not distinguish the claimed invention over a structure which already has the sealing device).

71. In re claim 102, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein an oblique surface (outside bottom edge of 23) tapering in the direction towards the longitudinal axis (A) is provided on the stopper (23) of the sealing device between a sealing surface (12) facing the housing container (10) and another sealing surfaces (bottom horizontal surface of 23) oriented perpendicular to a longitudinal axis (A) and directed towards the interior.

72. In re claim 104, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the passage (14) is provided in the form of at least one

groove-shaped recess disposed in the region of a sealing surface (outer surface of 23) of the stopper (23). Note that "in the region of" only requires the recess is arbitrarily near the stopper.

73. In re claim 106, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein at least one passage (4) is disposed in the portion of a groove-shaped accommodating region in the cap casing (21), in which at least certain regions of the inserted sealing device (Projection/Web), in particular its shoulder (see Fig. 7), are engaged.

74. In re claim 107, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein additional catch means are provided between the shoulder of the sealing device (Projection/Web) and the cap (11), in particular its cap casing (21).

Claim Rejections - 35 USC § 103

75. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

76. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

77. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kucera.

78. In re claim 5, with reference to the Figs. above, Kucera discloses the claimed invention except wherein the relative rotating or pivoting movement is caused by the pressing force (F) with an intensity of between 10N and 50N.

79. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have supplied the specified force, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Please note that in the instant application, page 6, second-to-last paragraph applicant has not disclosed any criticality for the claimed limitations.

80. In re claim 18, with reference to the Figs. above, Kucera discloses the claimed invention except wherein several caps of the closure device are assembled with the housing containers simultaneously to form the container system in a common assembly unit.

81. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have performed the method on several identical caps and containers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Please note that in the instant application, page 50, second paragraph, applicant has not disclosed any criticality for the claimed limitations.

82. Claims 21, 24, 25, 34, 42, 45, 46, 59, 65, 75, 103, and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer.

83. In re claims 21 and 42, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the pitch angle is 9° or 10° or 11° or 12°.

84. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected a similar value to that taught by Dreyer, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Please note that in the instant application, page 30, third paragraph, applicant has not disclosed any criticality for the claimed limitations.

85. In re claims 24 and 45, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the thread arrangement comprises three threads distributed around the internal surface.

86. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have supplied an additional thread to the two threads taught by Dreyer, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Please note that in the instant application, page 32, fourth paragraph, applicant has not disclosed any criticality for the claimed limitations.

87. In re claims 24 and 45, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein

88. In re claims 25 and 46, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the beginnings of the individual threads are offset from one another in the circumferential direction by approximately 120°.

89. However, with three threads as modified above, one of ordinary skill in the art would have found it obvious to space the threads equally around the circumference, as Dreyer also teaches equal spacing of the two disclosed threads around the circumference.

90. In re claims 34 and 65, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the at least one thread has a surface roughness of between 0.0125 μ m and 0.05 μ m on at least one portion co-operating with the thread of the housing container.

91. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have tailored the surface roughness of the threads, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Please note that in the instant application, page 31, third paragraph, applicant has not disclosed any criticality for the claimed limitations.

92. In re claim 59, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the first radius is bigger than the other radius.

93. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive

evidence that the particular configuration of the claimed container was significant.).

Please note that in the instant application, page 35, third paragraph, applicant has not disclosed any criticality for the claimed limitations apart from the result of an assymetrical thread.

94. In re claim 75, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein a tapered region of the housing container in its interior or its housing compartment between the two planes is between 0.1° and 3.0°.

95. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.). Also since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Please note that in the instant application, page 41, last paragraph, applicant has not disclosed any criticality for the claimed limitations.

96. In re claim 103, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the sealing surface on the stopper has a dimension of between 1.0mm and 2.5mm.

97. It would have been obvious to one having ordinary skill in the art at the time the invention was made to chosen a particular surface size range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105

USPQ 233. Please note that in the instant application, page 52, second paragraph, applicant has not disclosed any criticality for the claimed limitations.

98. In re claim 105, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein the recess extends from a peripheral region directed towards an interior of the housing container (10) in the direction toward the shoulder and terminates before it.

99. Dreyer fails to disclose wherein the recess terminates before the shoulder at a distance of between 1.0 mm and 2.5 mm.

100. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the specified the termination distance at between 1.0 mm and 2.5 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Please note that in the instant application, page 44, first paragraph, applicant has not disclosed any criticality for the claimed limitations.

101. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kucera as applied to claim 10 above, and further in view of Dreyer.

102. In re claims 14 and 15, with reference to the Figs. above, Kucera discloses the claimed invention except wherein the coating is applied to a sealing surface of a stopper of the sealing device directed towards the housing container, and wherein the coating is

applied to an internal surface of the housing container facing the sealing surface of the stopper of the sealing device.

103. However, Dreyer discloses a stopper (23) with a sealing surface (outer diameter surface).

104. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the stopper of Dreyer with the container of Dreyer and to have applied the coating of Kucera to the stopper sealing surface as well as the internal surface of the container which faces the stopper, as Kucera disclosed the concept of applying the coating to sliding surfaces of the closure to reduce friction.

105. Claims 29-33, 35, 61-64, and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer as applied to claims 19, 40, and 95 above, and further in view of Kucera.

106. In re claims 29-33, and 61-64, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the internal surface (threads) of the cap is provided with a coating to reduce friction and contain one lubricant which is incorporated into the material and supplied from a recess.

107. However, as in re claims 11, 13, and 17 above, Kucera discloses coating the threads of a cap and the threads of a container neck with a lubricant to reduce friction.

108. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the coating of Kucera with the threads of Dreyer for the purposes of reducing friction between the sliding surfaces. Note that coating the

surface (1/12) of Dreyer would have also coated the venting recesses (4/14), so the lubricant could be considered as being "supplied" from the recess, and that the claims can be grouped together because Kucera discloses coating both the cap surface and the container surface.

109. In re claim 35, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein a sealing device can be retained in it by means of a coupling mechanism.

110. However, Kucera discloses a cap (13) with a sealing device (14) located therein which is considered coupled when placed inside the cap.

111. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the sealing device of Kucera with the cap of Dreyer "to effect a better seal" on the container (Kucera, column 2, lines 26-27).

112. In re claim 96, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein a sealing device inserted in the cap is provided with a coating prior to being inserted, at least in the region of a sealing surface which can be directed towards the internal surface of the housing container.

113. However, Kucera discloses a sealing device (14) inserted into the cap which can also be coated to reduce friction as taught with regard to other sliding surfaces of Kucera.

114. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the sealing device of Kucera with the cap of Dreyer for improved sealing, and to have coated the sealing device as Kucera teaches the

coating of sliding parts to reduce friction, and applying that same concept to the sealing device would have constituted an obvious modification.

115. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer in view of Kucera as applied to claim 35 above, and further in view of U.S. Patent No. 4,747,498 (Gach hereinafter).

116. In re claim 36, with reference to the Figs. above, Dreyer discloses the claimed invention except wherein the coupling mechanism (28) is provided in the form of projections (29, 30) spaced at a distance apart from one another in the direction of the longitudinal axis (14) and disposed on at least certain regions around the internal circumference, projecting out from the cap casing (23) in the direction towards the longitudinal axis (14), which form a groove-shaped accommodating region on the internal face of the cap casing (23).

117. However, with reference to Fig. 3 below, Gach discloses a coupling mechanism (44) provided in the form of projections (44) spaced at a distance apart from one another in the direction of the longitudinal axis and disposed on at least certain regions around the internal circumference (column 4, lines 37-40), projecting out from a cap casing (21) in the direction towards the longitudinal axis, which form a groove-shaped accommodating region (at 46) on the internal face of the cap casing (21).

118. Therefore it would have been obvious to one of ordinary skill in the art to have provided the coupling mechanism taught by Gach with the cap and sealing device of

Dreyer in view of Kucera for the purposes of retaining the sealing device in the cap (column 4, lines 46-56).

119. In re claim 37, with reference to the Figs. above, Dreyer in view of Kucera and Gach discloses the claimed invention including wherein at least one passage (the region between teeth 44) is disposed in the portion of the groove-shaped accommodating region in the cap casing (21), in at least certain regions of which the insertable sealing device (46), in particular its shoulder (outer edge), engages.

120. In re claim 38, with reference to the Figs. above, Dreyer discloses the claimed invention including wherein several passages are distributed around the circumference (because the teeth 44 are annularly spaced, the regions between them which constitute the passages are also distributed around the circumference.

Conclusion

121. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 3,428,202 to Asmus discloses a cap with a sealing device which couples to a container by multiple threads. U.S. Patent No. 3,998,355 to Galer discloses a cap and closure with multiple threads spaced around the circumference.

Applicant is duly reminded that a complete response must satisfy the requirements of 37 C.F. R. 1.111, including: "The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. A general allegation that the claims "define a

patentable invention" without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section. Moreover, "The prompt development of a clear Issue requires that the replies of the applicant meet the objections to and rejections of the claims." Applicant should also specifically point out the support for any amendments made to the disclosure. See MPEP 2163.06 II(A), MPEP 2163.06 and MPEP 714.02. The "disclosure" includes the claims, the specification and the drawings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW T. KIRSCH whose telephone number is (571)270-5723. The examiner can normally be reached on M-F, 8am-5pm, off alt. Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew T. Kirsch/

Examiner, Art Unit 3781

/Anthony Stashick/
Supervisory Patent Examiner, Art
Unit 3781